

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (Previously Presented): A process for converting an elastomer from scrap to a regenerated elastomer which comprises the steps of:

- a) introducing the elastomer from scrap into a vessel;
- b) agitating the elastomer from scrap;
- c) heating the elastomer from scrap to a temperature below a temperature where the elastomer begins to degrade;
- d) introducing an oil into said vessel and admixing together the elastomer from scrap and the oil; and
- e) cooling down the so formed regenerated elastomer, whereby the regenerated elastomer has properties similar to a corresponding virgin elastomer,

said steps (b) and (c) being carried out simultaneously or separately and, said steps (c) and (d) being carried out simultaneously, and said oil being a preheated oil which heats said elastomer from scrap.

Claim 2 (Original): A process according to claim 1, wherein the admixing of said elastomer from scrap and said oil is carried out by rotating said agitation means to generate shearing forces, whereby heating said elastomer from scrap and said oil.

Claim 3 (Original): A process according to claim 2, wherein the agitation means is rotated at a revolution comprised between 1500 and 3000 rpm.

Claim 4 (Original): A process according to claim 1, wherein steps (b) and (c) are carried out simultaneously.

Claim 5 (Canceled)

Claim 6 (Original): A process according to claim 1, wherein said elastomer from scrap is heated at a temperature t_1 comprised between 50 and 200°C.

Claim 7 (Original): A process according to claim 6, wherein said oil is preheated, prior to admixing, at a temperature t_2 being higher or equal to t_1 .

Claim 8 (Original): A process according to claim 1, wherein said elastomer from scrap is heated at a temperature t_1 comprised between 160 and 190°C.

Claim 9 (Previously Presented): A process according to claim 1, wherein said oil is preheated, prior to admixing, at a temperature t_2 of about 100 to 180°C.

Claim 10 (Original): A process according to claim 1, wherein the elastomer from scrap is in a powder form, said powder being constituted by at least 90% of particles having a size of at least 15 mesh.

Claim 11 (Original): A process according to claim 10, wherein said particles have a size of at least 30 mesh.

Claim 12 (Original): A process according to claim 1, wherein agitation in step (b) is carried out by rotating agitation means at a revolution comprised between 400 and 800 rpm.

Claim 13 (Original): A process according to claim 1, wherein said elastomer from scrap is converted to said regenerated elastomer in a period of time comprised between 30 seconds and 60 seconds.

Claim 14 (Original): A process according to claim 1, wherein said process has a weight ratio, oil/elastomer from scrap, comprised between 0.015 and 0.040.

Claim 15 (Original): A process according to claim 14, wherein said ratio is comprised between 0.0175 and 0.0350.

Claim 16 (Original): A process according to claim 1, wherein the elastomer is a rubber.

Claim 17 (Original): A process according to claim 16, wherein said rubber comprises an ethylene propylene diene monomer rubber or a styrene butadiene rubber.

Claim 18 (Original): A process according to claim 1, wherein said oil is selected from the group consisting of synthetic oil, vegetable oil and mixtures thereof.

Claim 19 (Original): A process according to claim 18, wherein said oil is a synthetic oil selected from the group consisting of aromatic oil, naphtenic oil, paraffinic oil and mixtures thereof.

Claim 20 (Previously Presented): A process for converting an elastomer from scrap to a regenerated elastomer which comprises the steps of:

- a) introducing the elastomer from scrap into a vessel equipped with agitating means, said elastomer from scrap being in a powder form;
- b) agitating and heating said elastomer from scrap to a temperature below a temperature where the elastomer begins to degrade;
- c) introducing an oil into said vessel and admixing together the elastomer from scrap and the oil; and

d) cooling down the so formed regenerated elastomer, whereby the regenerated elastomer has properties similar to a corresponding virgin elastomer,
wherein said oil is preheated prior to admixing.

Claim 21. (Original): A process according to claim 20, wherein the agitation means is rotated at a revolution comprised between 150 and 1200 rpm.

Claim 22 (Original): A process according to claim 20, wherein said agitating means comprises a rotor having at least one blade mounted on a central shaft.

Claim 23 (Original): A process according to claim 20, wherein admixing of said elastomer from scrap and said oil is carried out by rotating said agitation means so as to generate shearing forces.

Claim 24 (Original): A process according to claim 23, wherein said elastomer from scrap is heated from heat generated by the agitation generating shearing forces.

Claim 25 (Original): A process according to claim 23, wherein the agitation means is rotated at a revolution comprised between 1500 and 3000 rpm.

Claim 26 (Original): A process according to claim 20, wherein said elastomer from scrap is converted to said regenerated elastomer in a period of time comprised between 30 seconds and 20 minutes.

Claim 27 (Original): A process according to claim 26, wherein said period of time is comprised between 45 seconds and 3 minutes.

Claim 28 (Original): A process according to claim 27, wherein said elastomer from scrap is heated at a temperature t_1 comprised between 50 and 200°C.

Claim 29 (Original): A process according to claim 28, wherein said temperature t_1 is comprised between 140 and 170°C.

Claim 30 (Original): A process according to claim 20, wherein said powder has a particle size of about 15 to about 200 mesh.

Claim 31 (Original): A process according to claim 30, wherein said particle size is about 20 to about 120 mesh.

Claim 32 (Original): A process according to claim 20, wherein the powder is constituted by at least 90% of particles having a size of at least 15 mesh.

Claim 33 (Original): A process according to claim 32, wherein said particles have a size of at least 30 mesh.

Claim 34 (Original): A process according to claim 20, wherein said agitation is carried out in order to avoid having stagnant particles of said elastomer in the vessel.

Claim 35 (Original): A process according to claim 20, wherein said agitation is carried out so as to evenly heat the elastomer from scrap and therefore prevent its degradation.

Claim 36 (Original): A process according to claim 20, wherein said process has a weight ratio, oil/elastomer from scrap, comprised between 0.03 and 0.2.

Claim 37 (Original): A process according to claim 36, wherein said ratio is comprised between 0.05 and 0.09.

Claim 38 (Canceled).

Claim 39 (Original): A process according to claim 29, wherein said oil is preheated, prior to admixing, at a temperature t_2 being higher or equal to t_1 .

Claim 40 (Original): A process according to claim 39, wherein the temperature t_2 has a value comprised between t_1+10 and $t_1+40^\circ\text{C}$.

Claim 41 (Original): A process according to claim 20, wherein said oil is selected from the group consisting of synthetic oil, vegetable oil and mixtures thereof.

Claim 42 (Original): A process according to claim 41, wherein said oil is a synthetic oil selected from the group consisting of aromatic oil, naphthenic oil, paraffinic oil and mixtures thereof.

Claim 43 (Original): A process according to claim 20, wherein said agitation is maintained during step (c).

Claim 44 (Original): A process according to claim 20, wherein said agitation is maintained during steps (c) and (d).

Claim 45 (Original): A process according to claim 20, wherein said process further comprises after step (b) and prior to step (c):

b') stopping said agitation

and said agitation is started again in step (c), after the introduction of the oil into said vessel.

Claim 46 (Original): A process according to claim 20, wherein in step (d), the regenerated elastomer is kept in continuous motion in order to avoid degradation.

Claim 47 (Original): A process according to claim 20, wherein said process further comprises after step (c) and prior to step (d):

c') ejecting said regenerated elastomer from said vessel.

Claim 48 (Previously Presented): A process according to claim 47, wherein in step (d), said regenerated elastomer is cooled down to a temperature below 120°C to prevent its degradation.

Claim 49 (Original): A process according to claim 20, wherein said process is carried out in the presence of air.

Claim 50 (Original): A process according to claim 20, wherein said process is carried out under an inert gas atmosphere.

Claim 51 (Original): A process according to claim 20, wherein the elastomer is a rubber.

Claim 52 (Original): A process according to claim 51, wherein said rubber is an ethylene propylene diene monomer rubber or a styrene butadiene rubber.

Claim 53 (Canceled).

Claim 54 (Canceled).

Claim 55 (Canceled).

Claim 56 (Canceled).

Claims 57 (Canceled).

Claims 58 (Canceled).

Claims 59 (Canceled).

Claims 60 (Canceled).

Claims 61 (Canceled).

Claim 62 (Canceled).

Claim 63 (Canceled).

Claim 64 (Canceled).

Claim 65 (Canceled).

Claim 66 (Canceled).

Claim 67 (Canceled).

Claim 68 (Canceled).

Claim 69 (Canceled).

Claim 70 (Canceled).

Claim 71 (Currently Amended): A snowmobile track comprising the regenerated elastomer of claim 1, wherein the elastomer is a rubber of claim 57.

Claim 72 (Previously Presented): A process for converting an elastomer from scrap to a regenerated elastomer which comprises the steps of:

- a) introducing the elastomer from scrap into a vessel;
 - b) agitating the elastomer from scrap;
 - c) heating the elastomer from scrap to a temperature below a temperature where the elastomer begins to degrade;
 - d) introducing an oil into said vessel and admixing together the elastomer from scrap and the oil; and
 - e) cooling down the so formed regenerated elastomer, whereby the regenerated elastomer has properties similar to a corresponding virgin elastomer,
- said steps (b) and (c) being carried out simultaneously or separately and said steps (c) and (d) being carried out simultaneously or separately, wherein said elastomer from scrap is heated at a temperature t_1 comprised between 50 and 200°C, and wherein said oil is preheated, prior to admixing, at a temperature t_2 being higher or equal to t_1 .

Claim 73 (Previously Presented): A process for converting an elastomer from scrap to a regenerated elastomer which comprises the steps of:

- a) introducing the elastomer from scrap into a vessel;
- b) agitating the elastomer from scrap;
- c) heating the elastomer from scrap to a temperature below a temperature where the elastomer begins to degrade;
- d) introducing an oil into said vessel and admixing together the elastomer from scrap and the oil; and
- e) cooling down the so formed regenerated elastomer, whereby the regenerated elastomer has properties similar to a corresponding virgin elastomer,

wherein said oil is preheated, prior to admixing, at a temperature t_2 of about 100 to about 180°C.